REMARKS

The present amendment is submitted in response to the Office Action dated February 9, 2007, which set a three-month period for response. Filed herewith is a Request for a Three-month Extension of Time, making this amendment due by August 9, 2007.

Claims 4 and 5 are pending in this application.

In the Office Act ion, the specification was objected to for various informalities. Claim 4 was rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,066,439 to Nishikawa et al. Claim 4 was further rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,277,858 to Neal. Claim 5 was rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa et al or Neal as applied to claim 4, and further in view of U.S. 2004/0032049 A1 to Ruitenberg et al.

In the present amendment, the specification has been amended to adopt the title proposed by the Examiner and to add cross references to the parent application as well as the related priority document.

Turning next to the substantive rejection of the claims, the Applicants respectfully submit that the cited references neither anticipate nor make obvious the present invention as defined in claims 4 and 5.

The Examiner rejected claim 4 as being anticipated by both Nishikawa and Neal. Looking first at the Nishikawa reference, this patent separately requires the additional installation of a steam jet apparatus 5 and heated plates 7

in order to obtain high-strength and low-shrinkage yarns. As disclosed in the present application in the Description of the Prior Art, a large installation space is needed to apply the steam supply apparatus or heated plates to the preparation process. In addition, economical difficulties are associated with this process, because of the high cost incurred by the additional installation and the use of a large amount of energy in the course of production. Further, the installation of heated plates 7 around a drawing roller 6 makes it difficult to hold up the yarn, thereby decreasing productivity.

In contrast, the method of the present invention can manufacture polyester yarns having excellent physical properties, such as tenacity of 7.4 g/d or higher, elongation at breakage of 19 to 26%, and shrinkage percentage of 2% or lower, by appropriately adjusting the speed at which the yarn is spun, the total draw ratio, the relaxation percentage, and the relaxation temperature, without using a device as described in the prior art.

In addition, the present invention differs from Nishikawa in spinning speed and the temperature of the relaxation region, as shown below:

	Present invention	Nishikawa
Spinning speed	383 – 490 m/min	580, 1860, 1950 m/min (examples)
Temperature of relaxation region	230 – 250 °C	160 °C (example: temperature of drawing roller)

With regard to the Neal reference, as discussed in the present application, Neal discloses a method of preparing a low shrinkage polyester yarn having 7.2 g/d or higher tenacity, shrinkage percentage less than 20 % at 177 °C, and

shrinkage percentage less than 4.5% at 200 °C, achieved through a continuous spinning drawing process. However, the process separately requires the installation of heated rollers enclosed within a heated roller box. This entails the same problems described in connection with the Nishikawa patent noted above.

With regard to the rejection of claim 5, this claim depends on claim 4. The Ruitenberg reference discloses that it can achieve relaxation in two stages. This statement discloses a general concept, but two-stage relaxation is not applied in the examples shown in Ruitenberg. In contrast, the present invention does apply the two-stage relaxation method through appropriate processes and recognition of necessity.

Because claim 4 includes features that are neither disclosed nor suggested by Nishikawa or Neal, the rejections under Section 102 must be withdrawn. A prior art reference anticipates a claim only if the reference discloses every limitation of the claim. Absence from the reference of any claimed element negates anticipation. ***Row v. Dror***, 42 USPQ 2d 1550, 1553 (Fed. Cir. 1997). Claim 4 and its dependent claim 5 are therefore patentable over the art of record.

The application in its amended state is believed to be in condition for allowance. However, should the Examiner have any comments or suggestions, or wish to discuss the merits of the application, the undersigned would very much welcome a telephone call in order to expedite placement of the application into condition for allowance.

Respectfully submitted,

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